

Mar - May 76

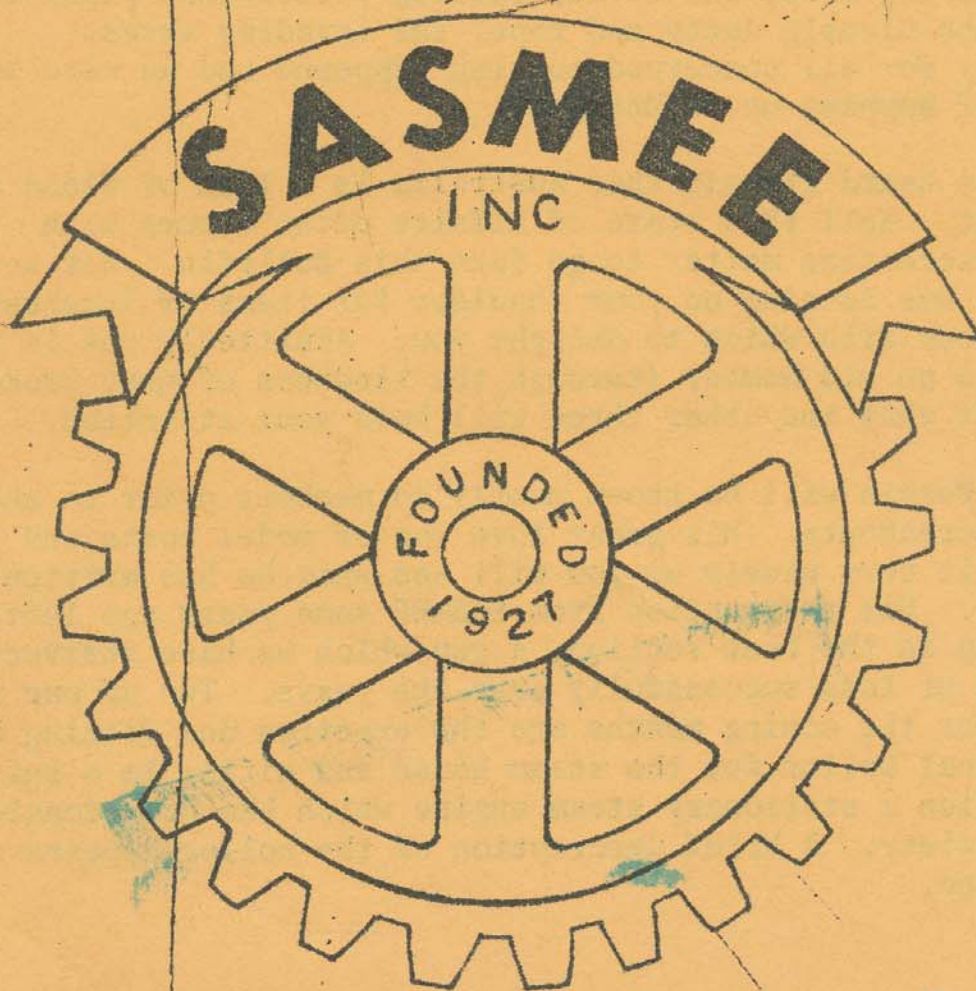
SASMEE

SOUTH AUSTRALIAN SOCIETY OF MODEL
& EXPERIMENTAL ENGINEERS

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BULLETIN

THE OFFICIAL JOURNAL OF THE SOUTH AUSTRALIAN SOCIETY
OF MODEL AND EXPERIMENTAL ENGINEERS.



EDITORIAL

Once again history has repeated itself by presenting us with another New Year, together with all of the problems that such an event brings in its train. Already our road toll stands at nearly two a day killed on the roads, the ever present threat of war and civil war in various trouble spots, the foolish prediction that Adelaide would suffer earthquakes and tidal waves which fortunately did not occur. Like King Canute who centuries ago tried to stem the rising tide, one of our leading politicians plans to stand on the Glenelg Jetty and repel the invading waves. Fortunately for all concerned nothing happened and we were spared the task of mopping up SASMEE Park.

I have heard it said that Australia is a land of flood or and drought. Well this state of affairs often occurs with finding interesting matter to go into this Bulletin. Not so long ago I was leaning on your shoulder for items of interest. I now have four with which to delight you. Admittedly one is an obituary to an old member (through the kindness of Herb Croker) but I trust that the other three will hold your attention.

Bill Perrin will be known mostly to members prior to about 1969 or thereabouts. His great love was of model boats and Herb puts it very nicely as you will see what he has written about Bill. His resignation from SASMEE some years ago left quite a gap in the boat section, a gap which we have striven to close more or less successfully over the years. Two of our major projects for the coming months are the erection and fitting up of a vertical boiler for the steam house and siting in a suitable position a stationary steam engine which has been donated to your Society. A brief description of the boiler appears on another page.

With the resuming of our Sunday Field Days we can look forward to a fairly busy year as we are committed to two Charity Field Days plus the Easter Convention at West Ryde which no doubt a number of SASMEE Members will attend, plus the abovementioned items of boiler and engine to be attended to so there should be something for everybody.

An innovation this year is the inclusion in this Bulletin of the Canteen Roster for all of 1976. This is in addition to the usual quarterly roster. By referring to the roster you can plan for months ahead and thereby I trust eliminate some of the problems associated with this chore. So I would ask you to please read it.

You will also find further over an item calling your attention to your annual subscription which will fall due at the May Annual General Meeting, and Election of Officers.

If you have managed to read this far may I point out that the next 2 pages or so concern you quite a lot for they are reminders of meetings, track days, working bees, canteen rosters etc. Having taken these in your stride you will then come to more agreeable reading which I trust you will enjoy.

Best wishes for 1976 -

C. Burden
Editor & Hon. Secretary

CHANGE OF ADDRESS:

Our Honorary Treasurer -

C. S. Bamford
38, Tolley Road,
Hope Valley 5090

QUARTERLY AGENDA

GENERAL MEETINGS:

2nd Tuesday each month at 8 p.m.

MARCH 9TH:

Mr. Harold Clisby will speak on a recent trip to United States of America.

APRIL 13th:

Mr. John Wakefield will give a talk on his trip to South Africa.

MAY 11TH:

Annual General Meeting and Election of Officers.

INTERMEDIATE MEETINGS:

'Informal', 4th Tuesday each month at 8 p.m. March 23rd, April 27th, May 25th.

COMMITTEE MEETINGS:

1st Tuesday each month at 7.30 p.m.
March 2nd, April 6th, May 4th.

WORKING BEES:

1st Saturday each month at 1 p.m.
March 6th, April 3rd, May 1st.

PUBLIC FIELD DAYS:

1st Sunday each month at 2 p.m. - March 7th, April 4th, May 2nd.
3rd Saturday each month at 2 p.m. - March 20th, April 17th, May 15th.

OTHER EVENTS:

May 23rd Sunday, Special day in conjunction with the Apex Club.

October 24th Sunday, Special day in conjunction with the Lions Club City of Adelaide.

LOCO TRACK SUPERVISORS:

A. Ide, L. Fielder, M. Bradford

PLEASE CHECK WITH ROSTER FOR YOUR ATTENDANCE ON CANTEEN

SUNDAY FIELD DAY CANTEEN ROSTER

March 7th

F.J. Morcom
B. Homan

April 4th

C. Lorbeer
P. Cavanagh

May 2nd

K.R. Stephens
D. Irving

SATURDAY FIELD DAY CANTEEN ROSTER

March 20th

W. Bradford
E.C. Hunt

April 17th

A.J. Brabham
D. Osborne

May 15th

A.T. Middleton
D. Price

IMPORTANT NOTICE

IF UNABLE TO ATTEND AS PER ROSTER PLEASE PHONE
SECRETARY PH.79.5292, SO THAT A RESERVE CAN BE
NOTIFIED IN TIME.

PLEASE REMEMBER TO BRING THE MILK

ROSTER FOR LOCKING UP ALL BUILDINGS AND GATES:

MARCH

Sunday 7th J. Davey
Saturday 6th H. Bateup
13th P. Griscti
20th L. Fielder
27th B. Homan

APRIL

Saturday 10th A. Ide
17th J. Davey
24th H. Bateup

APRIL

Sunday 4th A. Brabham
Saturday 3rd I. Clark

MAY

Sunday 2nd P. Griscti
Saturday 1st L. Fielder
8th B. Homan

PRESIDENT'S COMMENT:

With the end of the Club Year drawing near I make the following observations. The Committee does a lot of unseen work and deserves mention of its efforts. There are 12 Saturday Field Days to attend, 12 General meetings, 11 Committee meetings, 12 working bees, 10 Sunday Field Days and 2 special Charity days. This makes a total of 59 Club activities plus other special activities as carried out by the Treasurer and Secretary who have a constant job with accounts and correspondence.

I have to mention the special working bees such as the members working on the removal of the steam engine from Wadlow Limited and also the removal of the boiler from Eudunda. Both of these to be erected at S.A.S.M.E.E. Park.

The Canteen needs staffing at each Field day, and it works out that you have canteen duty only once in two years if all take their turn. When you do canteen duty cheerfully (I hope) spare a thought for persons who order the drinks, milk and sweets etc., and have it all ready for your duty. When something goes wrong it is easy to criticise but please remember that many hands make light work and there is always plenty of work to be done, and if we were always perfect it would be a dull style of life.

To all members actively engaged in our Club activities I offer my THANKS.

Paul Griscti
President.

NOTE YOUR FEE FOR 1976-77 falls due at the ANNUAL GENERAL MEETING in MAY and the Treasurer will ACCEPT YOUR SUBSCRIPTION IN ADVANCE

OBITUARY

HERBERT EDWARD PERIN

Known as "Bill" to his friends, Bill Perin passed away in the Repatriation Hospital on 11th December 1975, aged 68 years.

Born in London, Bill had all his life been interested in model steam engines and boats. He was for years a member of the Victoria Park Club in East London. He attended technical and art classes and liked to roam the countryside sketching and painting landscapes and picturesque old buildings.

Serving in the army during the war Bill and his family came to Australia about 20 years ago. Living first in Sydney they later came to Adelaide and there Bill was introduced to and joined SASMEE, becoming a valuable and very active member of our society.

A master craftsman and an artist to his fingertips, his aesthetic sense inspired him to produce those very true to life model ships we used to admire on our pond. Older members will remember Foylemore, Condor, Gullamix and his masterpiece, that lovely little wooden, plank on frame, fishing trawler St. Frances, steaming back and forth with a trail of smoke from her funnel, while on deck were those characters Bill had created, Tony with his lighted cigarette, sitting on the bollards forward while Kruschev emerges from the after companionway with a bucket of slops.

Bill leaves a wife, son and daughter and several grandchildren and a host of friends who shall mourn his passing but his memory will bring a warm glow in the hearts of all those who shared his friendship.

Kindly supplied by Herbert Croker

RECENT EVENTS:

The 1975 Annual Show of work seemed to be dominated by a considerable amount of 7½" rolling stock.

Another imposing eye catching exhibit was Brian Niesche's C type Foden Steam Wagon being built to 3" to the foot scale.

Paul Griscti ably demonstrated what can be modelled without the use of machine tools with a display of 2 hand crafted ploughs and a Jack plane all made 3" to the foot.

Len Peckham's 7½" gauge Passenger Vehicle attracted great interest and is a great credit to the builder. Several model locos ranging from 3½" - 5" were on display and we look forward to their appearance on SASMEE track.

A model cannon 6" muzzle loading conjured up visions of warfare 150 years ago. A visitor had on view an Ericson Hot Air Engine which was silently ticking over.

Altogether a very comprehensive showing and reflects great credit on all proud builders.

Here is a list of exhibitors and their models -

- | | | |
|--------------|---|---|
| John Barkes | - | 7½ gauge Princess Royal tender |
| Don Osborn | - | 5" gauge G.W.R. Manor Hill |
| John Welch | - | Bogie frame 7½ gauge Diesel Electric, in cast aluminium |
| J. Welch | - | 7½ gauge Jubilee Boiler and Smoke Box |
| T. Middleton | - | 3½" gauge L.N.E.R. tank loco |
| P. Griscti | - | Model Mould Board Plough) |
| | | Early wooden plough) all at 3" to 1 |
| | | Model Jack Plane) foot |
| B. Niesche | - | Foden Steam Wagon C type at 3" to 1 foot |
| L. Peckham | - | 7½ gauge Passenger Vehicle and 4 wheel open waggon |
| M. Bradford | - | Model Cannon 1850 era muzzle loading smooth bore at 1" to the foot. |
| J.C. Newland | - | 3½" gauge 0.6.0 tank "Molly" |
| A. Saunders | - | 1800 m/m Wing span sail plane |
| L. Hope | - | 5" gauge 400 class "Garrett" frames, bogies, etc. |

Student Member -

N. Morcom - 5" gauge Juliet

Visitor -

J. Beale - Ericson Hot Air Engine

Mr. Beale is now a Full Member

SPECIAL DAY FOR NEW MEMBERS AND DRIVER LEARNERS
HELD SUNDAY NOVEMBER 30TH

In order to encourage and maintain the interest of new members and those without locos it has long been felt that such a day would be of great use to your Society and I feel that such is the case particularly in view of the many requests for a similar day in the near future.

With the aid of Howard Bateup and his 5" Jubilee, my 5" Britannia and 5" Stirling a most successful day was enjoyed. Starting with a brief talk on firing and the use of the various controls steam was raised and in turn each aspiring driver was taken around first as a passenger and then in the driver's seat with a driver behind him to guide him on his way. In this manner each person drove in turn the various models operating. Owing to a morning start the various families had their lunch at the grounds barbecue style.

Among those attending were :

Mr. & Mrs. Faccenda & Sons
Mr. & Mrs. Ide
Mr. & Mrs. Halstead & Family
Mr. & Mrs. Clark and Family
Mr. F. Morcom
Master N. Morcom
Mr. H. Bateup
Mr. T. Fitton

Mr. K. Besley
Master P. Gore
Mr. J. James
Master C. Gifford
Mr. T. Middleton
Mr. W. Brownlow
Master Christopherson
Master J. Hamilton

I NAID OF ORTHOTIC WING APPEAL (by Lions Club, Walkerville)

November, Saturday 29th 1975. A Field Day was held on this date to assist the above Wing. Due to other attractions the attendance was slightly on the light size but despite this a very enjoyable afternoon running took place with a good turn out of locos and boat men.

A few weeks ago in company with Paul Griscti, Terry Middleton and Peter Gore, your Secretary visited Eudunda to inspect a steam boiler which has been presented to SASMEE by the Southern Farmers Co-operative Society. It stands about 7 or 8 feet high and about 3 ft. 6" in diameter. It conforms to D.L.I. regulations and will, when a suitable crane can be obtained, be lifted out and transported to our Park, where it will be steamed and used to drive the models in the Steam House; particularly the larger ones. Some weeks later Paul, Terry and another member made another trip and removed the fittings etc. which now adorn our Club House floor.

OUR ANNUAL BARBECUE:

Following our usual custom of a family get-together after our December Field Day a number of members with their families stayed on after loco running had ceased and enjoyed, in most cases, a barbecue tea in the open air. Our President Paul, suitably attired as Father Christmas quickly had an admiring throng of children around him and dispersed sweets customary to the Festive Season. Inside the Club House a 'Nativity Scene' had been arranged and added to the Christmas atmosphere. Several large tables had been set up and helped to dispel the creation of groups. Altogether it was a very pleasant occasion and enjoyed by all.

The January General Meeting, with business over, was pleasantly spent with a very fine film show, the films being loaned by B.P. Australia. Tom England made the necessary arrangements and we are indebted to him for an entertaining evening.

I understand that arrangements are well in hand for the removal and delivery of the steam engine from Wadlows, Port Adelaide.

Accepting an invitation to visit the Adelaide Steam Miniature Railway at Regency Road, in company with my wife and granddaughter I spent a very instructive and interesting afternoon at their grounds. Set in a large 'L' shaped block there is now a most impressive model G/L railway set-up. I understand that there is 2000 feet of laid track with the main line extending around the periphery of the area and enclosing the yard which consists of several sets of track each serving a given purpose. These are inter-connected by means of points, cross-overs and other railway technicalities. These are controlled from an imposing signal box at the western end, the method of control is hydraulically operated. A bank of levers connected to the necessary oil valves gives instant control over the multitude of points.

The Society is to be congratulated on a fine job and when completed will hold its own with any similar set up in Australia.

SASMEE MEMBERS AT GOULDS ROAD, STIRLING

On a recent weekend a number of members with their families visited Mr. Fred Hercus' model railway track at Stirling. The track, between 450-550 feet long and continuous, is set in a small valley on Fred's property and consists of 3½" and 5" gauge. It is well graded and gives a good ride. An imposing bridge at the bottom end over a small creek with about a twenty foot drop to the bottom inspires caution when approached. Afternoon tea, cakes and cool drinks were provided by the host and hostess. Altogether a very pleasant afternoon and our thanks to Mr. & Mrs. Hercus.

Those present were:

Harry Pearce

Horrie Guignon

Owen Thomas & Family

Bob Smythe & Family

Mr. Hercus Family & Friends

Clary Burden & Wife.

COMING EVENTS:

Members are reminded that the Annual Steam Convention will be held this Easter at West Ryde.

May 11th, Tuesday, is our Annual General Meeting and Election of Officers. Also pay up night for Annual Subs. You are particularly requested to be present at this very important meeting.

Sunday May 23rd has been set aside to aid the Apex Club in their Fund raising appeal. Your co-operation is earnestly desired on this occasion. Further details later.

Sunday, 24th October. This date the Lions Club, City of Adelaide will be assisted in their fund raising for Charity by your Society. Please give them your help by attending.

Members are advised that Membership lists are now available either at the monthly meeting or by contacting Secretary.

WELCOME TO NEW MEMBERS:

Christopher Lorbeer - whose interest is General
J. Beale - " " "

We make you welcome to the Society and invite you to participate in our various activities.

Dear Member,

In order to cut down administration expenses we are adopting this new method of collecting your yearly subs due on 1st June 1976.

Please complete the form below and send or hand to the Treasurer or to the Honorary Secretary in exceptional circumstances.

My address is - C.S. Bamford
38, Tolley Road,
Hope Valley 5090

Thank you _____ detach here _____

The South Australian Society of Model and Experimental Engineers Inc.
Notice of Subscription due.

NAME _____

ADDRESS _____

	FULL	COUNTRY	JUNIOR	STUDENT
Insurance Fee	\$1.00	\$1.00	\$1.00	\$1.00
Subscription	<u>9.00</u>	<u>4.50</u>	<u>4.50</u>	<u>2.00</u>
Total	<u>\$10.00</u>	<u>\$5.50</u>	<u>\$5.50</u>	<u>\$3.00</u>

Amount sent as per your category \$ _____

Cheques: Make payable to SASMEE or Bearer and may be crossed

Postal Notes and Money Order:

Make payable to Post Office Hope Valley
Please send or present this form to accredited Officer

A separate receipt will be issued

CANTEEN ROSTER FOR 1976

<u>January</u>			
Sunday	4th	-	Cancelled
Saturday	17th	-	A.G. MATTHEWS S. FACCENDA
<u>February</u>			
Sunday	1st	-	R. BICKFORD D.H. SCHLUTER
Saturday	21st	-	B. NIESCHE P.B. COOPER
<u>March</u>			
Sunday	7th	-	F.J. MORCOM B. HOMAN
Saturday	20th	-	W. BRADFORD E.C. HUNT
<u>April</u>			
Sunday	4th	-	C. LORBEER P. CAVANAGH
Saturday	17th	-	A.J. BRABHAM D. OSBORNE
<u>May</u>			
Sunday	2nd	-	K.R. STEPHENS D. IRVING
Saturday	15th	-	A.T. MIDDLETON D. PRICE
<u>June</u>			
Sunday	6th	-	A.B. TRYFELL L. HOPE
Saturday	19th	-	P. BURTON W. HOLDSWORTH
<u>July</u>			
Sunday	4th	-	D. ALLEN K. BRADFORD
Saturday	17th	-	P.K. BESLEY A.L. BROAD
<u>August</u>			
Sunday	1st	-	D. COLLINS ^{GS} G.M. CULLEY
Saturday	21st	-	R. GIESECKE G. CAESAR
<u>September</u>			
Sunday	5th	-	T. FITTON F.J. GORDON
Saturday	18th	-	J.R. HENDRY J.A. JAMES
<u>October</u>			
Sunday	3rd	-	K.R. HALSTEAD J. BEALE
Saturday	16th	-	M.F. KLOEDEN L. PECKHAM
<u>November</u>			
Sunday	7th	-	M.R. McLEOD M.F. SAMBELL
Saturday	20th	-	J.C. NEWLAND D.W. SEARLE
<u>December</u>			
Sunday	5th	-	Cancelled
Saturday	18th	-	M.J. ROBINSON A.J. SAUNDERS

ARTICLE BY PAUL GRISCTI

CAN YOU HELP?

This year is the 100th Anniversary of the introduction of the STUMP JUMP PLOUGH. It was introduced in South Australia and exhibited at Moonta in 1876.

I wish to make a model of a Stump Jump Plough and seek information of one of the original ploughs which had a weight (56 lbs) on the end of a lever to return the share to position.

I have searched the old newspapers and the original patent applications in the State Library, Archives etc., and have had little success. It seems strange that I can obtain from overseas drawings of ploughs made before 1800 and yet cannot find drawings of a South Australian built plough.

The original weight was abandoned by 1888 and I have located a model built in 1886 at Peterborough (Petersburg) by a Mr. J. Davey, who sent it to England for Queen Victoria's Jubilee, but this is of a type known as bridal draught. Having spent many long days in research I choose to use the word introduced instead of invented because I have found 5 different people claiming to have invented it, and the debates in S.A. Parliament of 100 years ago on the subject make interesting reading.

An interesting point is that the J.B. Smith who exhibited the three furrow stump jump plough called "THE VIXEN" was by trade a patternmaker who served his time with 'Ramseys', an agricultural implement maker. I served my apprenticeship as a patternmaker at an agricultural implement maker, and it seems a strange coincidence that I am trying to trace these original ploughs.

Paul Griscti.

STEAM ROLLER TO SPAIN - by Herbert Croker

A steam roller for Barcelona. They drove all night from Basingstoke to London Docks, then drew the fire, blew down the boiler and we tried to hoist it aboard with the jumbo derrick at

No.2 hatch. The Bill of Lading gave the weight as 12 tons but that steamroller refused to leave the quay when we hove away on our winches. The ship just listed over.

She was, of course, a very little ship, sailing out of London on the Spanish trade, calling at every port in Spain, from Passajes in the corner of the Bay of Biscay to Barcelona in the Mediterranean - where the nuts come from.

Steam rollers, and traction engines, always fascinated me. This one was sparkling new, smelling of oil and crackling with heat. The rampant brass horse up in front had BASINGSTOKE below it in brass letters.

They relit the fire, raised steam and drove around to the far side of the dock where the PLA 50 ton crane loaded the steamroller into the bottom of No.2 hold, where she would act as ballast until discharged at Barcelona - but she never got there !!!

All this delay gave us an extra night at home in London. We sailed with the tide in the morning. Clear of the Thames we laid off Sheerness and loaded 100 tons of gunpowder, brought out in Spritsail Barges. Curtis and Harvey's Black Sporting Powder, in 21b cans, packed in nice pine cases, 50 tins to a case. I tallied them all into No.3 hold, saw them stowed in the tweendecks and on the hatchway. I did wonder what would be the effect if there was an explosion.

It was the end of March and the year was 1925 and we were outward bound to Spain with a crew of 23, all told, and carrying 12 passengers, all elderly people booked for the round trip. It was the only way to see Spain in those days, the country had not been opened up to tourists, no airways, no cars and very few roads.

She was a nice little ship, ex German, not very fast, about 8 knots, sometimes more, mostly less, in and out of port every day, busy checking cargo and manifests but pleasant places and never more than 8 weeks away from home. There were only a few of us, the Skipper, 2 mates, myself who operated the wireless and acted as Purser, and three engineers. It was an easy job for engineers, 2 Scotch boilers, a triple expansion engine, a few pumps and a very small dynamo which never ran during the day or at all in port. She was a coal burner, of

course, bit dirty and dirty firemen, the engineers themselves were on the scruffy side but we had to make the best of such things in those days.

"Sparks will take you up to the town and show you where to buy some excellent cider" the Mate told the passengers at Passajes. They were frail as well as elderly, I had to push some of the old girls up the steep hill from the harbour. I don't remember how we got back, we had all sampled much of the local brew and had a couple of crates to take aboard. It looked like being a pleasant trip with many ports and many wines to sample.

At Corunna I took the same crowd to see Sir John Moore's grave- "They buried him darkly by dead of night", and we discharged the gunpowder loading barrels of resin in its place.

We were rounding Cape Finisterre at midnight, butting into a heavy sea and blowing half a gale, when fire was discovered in No. 3 hold, just below where the gunpowder had been stowed. The casks of resin caught alight and within two hours we had to abandon ship, ablaze from stem to stern.

It was a terrifying time, trying to get round Finisterre before the engineroom became too hot for the engineers to remain below. The ship was close in near those towering cliffs, with the Atlantic rollers thundering at their base, the flames from the burning ship lighting the awful scene. No.3 shaft was abaft the engineroom, the bulkhead was soon red hot and the coal bunkers each side the upper engineroom were alight. Conditions down there were dreadful, the engineers took turn about, swathed in wet blankets. Up top flames like from a blowlamp were roaring out of every engineroom skylight. We got round into shelter and abandoned ship from over the bow. The passengers were sent off first in a boat with their luggage. The sailors carried them through the surf and left them at the base of a cliff where they dodged the rising tide until rescued after daybreak.

We hung off in the other boat, watching the burning ship, the flames roared hundreds of feet, her sides were red hot, but we could hear the general service pump pounding away. The Chief had

left it running, pumping water into No.3 hold, and the Weir's Pump was left on the boilers. There could be no shortage of steam in that inferno.

When daylight came we saw the entrance to a little port, Corcubion, a fishing village. We landed from the lifeboat at the old stone steps where the fishermen have landed their catches for centuries. No foreigners had been seen in Corcubion for many years. Our crew were billeted out amongst the houses and cottages. The sailors, given unlimited vino, were soon chasing the girls around the streets. The one policeman was unable to cope with such numbers but the mothers dragged their daughters indoors and barricaded their houses.

The Skipper and Mate and I watched the ship become a mere puff of smoke away across the bay. Finally she sank in a cloud of steam. The steamroller went to the bottom with her, possibly it is still there. It was all written off at Lloyds as a CTL (casualty total loss). That was over 50 years ago.

Corcubion is far off the beaten track, the nearest railway was at Santiago, 100 miles away across the mountains. I roamed the wild hills around for a week or more till finally a truck, which came to pick up fish, took us to Santiago and from there by train to Vigo, where we caught a big ship to Liverpool - arriving there without clothes or money - and for many of those men, without a job. We did not deserve sympathy, we had lost our ship - and what I would give today to have that steamroller, all spanking new and crackling with heat and to look up again at that rampant brass horse.

MOONTA MINES WORKSHOPS

Out of the past. In the 1900s and earlier several pulleys 12' in diameter were cast in the foundry at the Moonta Mines. They were used for the hand gear of the shafts. They were done under the supervision of the late Charlie Hall who was for many years a foreman of the Moonta Mines foundry. Another notable piece of work done in

the nineties was the manufacture of a very large faggotted iron shaft, which was used to drive the machinery at Richman's concentrating plant. The shaft was forged in the blacksmiths shop from thousands of small pieces of scrap wrought iron, such as bolts, horseshoes, etc. which were welded into blooms in a furnace and beaten into shape with a steam hammer. The shaft which was 32' long and 18" in diameter at the thickest part, was turned for its full length in a lathe by an English born mechanic named Bob Epsom and the forging was done under the direction of the late Thomas Cliff senior, assisted by Michael Martin and Fred Fisher. In the early days of Moonta there were no engineering plants in South Australia competent to undertake the manufacture and repair of mining machinery. The local company was therefore compelled to lay down its own plant, which at that time was probably the best of its kind in Australia.

Among other things it manufactured air compressors and steam engines, which for many years gave efficient service, according to the standards of the times. During one of the rush periods it is said that as many as 300 men and boys were employed in the shops. The company also used to make its own steam boilers from iron plates, as steel plates were not then known. The steam pressures were low, being only a little over 30 lbs. per square inch, but to add to the difficulties the only water available for steaming was that pumped from the mines. It was heavily charged with salts, and a staff of boiler cleaners was employed in chopping off the incrustations formed on the insides of the boilers by evaporation.

The Copper Metropolis:- interesting facts related and taken from a descriptive article published in 1899.

The author described the situation of the Moonta Mines as a limestone flat devoid of trees which was once originally so thickly covered with scrub that people frequently lost their way. In fact it is stated that once the two-storey office could not be seen from Captain Hancock's house only a few yards away. The stick fences around the miners homes gave further proof that ti-tree scrub was once plentiful.

There are 45 miles of drives and shafts and winzes at Moonta

and 25 miles at Wallaroo and the aggregate depth of the main and subsidiary shafts at both places is over nine miles. The stopes with other workings if placed in a direct line would form a tunnel 170 miles long. The total number employed in all the company's operations is 2,340 persons.

The average value of dressed ore from Moonta is 16.5 per cent and from Wallaroo Mines 11.5 per cent and the smelters turn out 5,000 tons of metal yearly.

There are 12 miles of surface railways at the two mines and nearly 10 miles of underground tramway. Moonta has three locomotives and the rolling stock amounts to over 200 trucks and there are 70 horses kept at the stables.

The first long distance telephone in South Australia was installed between the Moonta and Wallaroo Mines. The first ore shipped from Moonta averaged 60 per cent when the price of copper was 100 per ton.

The mechanical shops are extensive and well equipped and all repairs are done locally. The moulding shop is a stone building 65' x 40' and has three cupola furnaces also two swinging cranes capable of lifting 10 tons. Any casting up to 10 tons can be turned out.

The patterns are kept in a store 7' x 30' consisting of two floors and a cellar. There are pulleys from 6' diameter to 2", spur wheels 10' diameter and bevel wheels up to 6'. Many of the patterns were designed by the foreman patternmaker, Mr. Albert Brown and the foreman of the iron and brass foundries is Mr. Chas Hall. The blacksmiths shop measures 130' x 50' and contains 18 forges, a faggoting furnace, and two steam hammers. Mr. T. Cliff the foreman has been with the company since 1863. The company makes and repairs its boilers and the boiler department employs 15 hands under the direction of Mr. Joseph Honniball who has been in the service 28 years.

The large fitting shop contains nine lathes and many other valuable machines. In a separate building is a large chuck lathe which can bore a wheel 12' in dia. Mr. Tom Skinner the foreman said he had a casting weighing 5 tons on the big lathe. Mr. Richard Eustice who constructed the British-Broken Hill concentrating plant is in charge of the carpenters shop and out door construction. The senior under-

ground officer Captain Barkla has been underground Captain at Moonta Mines for 36 years and the surface officer Captain Josua Skinner for a similarly long period.

MOONTA's LOCOMOTIVES

The first locomotive at Moonta Mines was built by Dubs and Co. an English company. It was broad gauge the same as the old tram line from Moonta to Wallaroo. It was afterwards converted to a 3 ft. 6" gauge at the mines workshops and transported to Wallaroo Mines where it remained in service until the Company ceased operations in 1923. The school boys of the eighties (1880's) had never seen any other locomotive and it was a never ending source of interest. One youthful diversion was placing pins on the rails for the 'lokey' to run over and flatten out. All the boys had an ambition to ride on a locomotive, but few ever realised their wish, though not for the want of asking. The refusal of their important requests usually drew forth rude remarks about 'Captain Hancock's Pig' an irreverent description of a most worthy locomotive, which owed its origin to the shrill squeal of the whistle.

In addition to the original Dubs engine, the mine later acquired another broad gauge locomotive made by the Fowler Company. This engine had a spark arrester and a seat at the rear, obviously meant for passengers. It had a top but open sides. A very tiny locomotive by Beyer Peacock arrived with the Fowler engine. It used to run a very short trip between Taylor's shaft and Richman's Plant and there was no other track it could use. Both engines were later altered to 3'-6" gauge at the mine workshops. Billy Wearne was the driver of the Beyer Peacock.

The little Beyer Peacock was sold for use at the Cape Otway forrest and when the purchaser saw it he said it was the very thing he had searched all over Australia to find. He did not mind the small water tank, as the engine would have to cross a creek 14 times in a two mile trip, and it would be no trouble to dip a bucket into the creek. The miniature lokey could have been more aptly called the 'Pig' than the one which bore that tag.

Another mechanical curiosity was a steam rail motor in very early times at Wallaroo Mines. It was only four wheels and a very

small vertical boiler in the centre. It was said that when the driver blew the whistle the engine would stop, all the steam being used up. After laying on the scrap heap for years such parts as could be used were salvaged; and were incorporated in a completed locomotive built by the mechanics in the mines workshops. The Hudswell Clarks engines with saddle tanks were the type finally adopted by the mining company as the most suitable. The short wheel base enabled it to negotiate sharp curves and anyone who remembers the loads hauled will recognise that it was a sturdy shunter.

Although the locomotive seemed like the brook, to run on for ever, it should not be thought that the parts never wore out. In fact except for the copper fire box and the steel tyres, there was not a part that could not, and was not, manufactured at the local shops. This involved a very large range of operations, from the making of intricate castings to the precise fitting of the link motion.

Locomotive fitting was considered high class work, and there were men in the mines workshops who in their day and generation could hold their own anywhere.

The driver of the first locomotive at Moonta Mines built by Dubs and Coy. was "Daddy" Howell, a welshman, and W.H. (Billy) Wearne was the fireman. This engine was afterwards converted to 3'-6" gauge by the late Fred Smedley at the Mines workshops and transferred to Wallaroo Mines, where it remained in service until the company ceased operations in 1923.

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